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**FILED**

**UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF ILLINOIS  
EASTERN DIVISION**

**FEB 10 2014**

**THOMAS G BRUTON  
CLERK, U S DISTRICT COURT**

**IN RE: NATIONAL COLLEGIATE  
ATHLETIC ASSOCIATION STUDENT-  
ATHLETE CONCUSSION INJURY  
LITIGATION**

**MDL No. 2492**

**Master Docket No. 13 C 9116**

**Judge John Z. Lee**

**JURY DEMAND**

**ABRAM ROBERT WOLF, SEAN  
SWEENEY, NATALIE KAY HARADA,  
RACHEL DIANNE HARADA, JIM  
O'CONNOR, BRETT SWEENEY, and  
BRETT CHRISTENSEN, individually and on  
behalf of all others similarly situated,**

**Plaintiffs,**

**v.**

**NATIONAL COLLEGIATE ATHLETIC  
ASSOCIATION,**

**Defendant.**

**No. 14-cv-**

**1:14-cv-01268**

**Judge John Z. Lee**

**Magistrate Judge Geraldine Soat Brown**

**CLASS ACTION COMPLAINT FOR MEDICAL MONITORING**

## TABLE OF CONTENTS

	<u>Page</u>
I. NATURE OF THE ACTION .....	1
II. JURISDICTION AND VENUE .....	7
III. PARTIES .....	7
A. Plaintiffs.....	7
B. Defendant.....	9
IV. FACTUAL BACKGROUND.....	10
A. The NCAA Had a Duty to Protect and Safeguard Student-Athletes .....	10
1. The NCAA Constitution declares that the NCAA will control intercollegiate sports to protect the physical and educational well-being of student-athletes. ....	11
2. The NCAA has publicly acknowledged its duty to protect the health and safety of student-athletes. ....	12
3. The NCAA promulgates annual guidelines for the protection of student- athletes' health and well-being. ....	14
B. A Primer on Concussions .....	14
1. Concussions and what they cause.....	14
2. Signs and symptoms of concussions.....	18
3. Second-Impact Syndrome.....	19
4. What doctors do.....	19
5. After a concussion. ....	20
C. Long-Term Effects.....	21
D. Studies Ignored by the NCAA .....	22
E. The NCAA's Inadequate Rules and Policies Regarding How the Games are Played .....	34
F. The NCAA's Inadequate Concussion Treatment and Return to Play Rules .....	35

1.	From 1994-2002, the NCAA refused to endorse any concussion grading scale or return-to-play criteria. ....	35
2.	The NCAA fails to adopt the guidelines promulgated by the 2001 Vienna Conference. ....	36
3.	The NCAA fails to adopt the guidelines promulgated by the 2004 Prague Conference. ....	39
4.	The NCAA fails to adopt the guidelines promulgated by the 2008 Zurich Conference. ....	40
5.	Too little, too late, the NCAA finally requires schools to have a concussion plan. ....	42
G.	The NCAA's Attempt to Shift the Economic Burden of its Negligence to the Class. ....	47
H.	Discovery of the Cause of Action, the NCAA's Fraudulent Concealment and Plaintiffs' Vulnerability. ....	48
V.	CLASS ACTION ALLEGATIONS. ....	50
VI.	CLAIMS ALLEGED. ....	53
	COUNT I NEGLIGENCE (On Behalf of the Class). ....	53
	COUNT II MEDICAL MONITORING (On Behalf of the Class). ....	55
	JURY DEMAND. ....	59
	REQUEST FOR RELIEF. ....	60

Plaintiffs Abram Robert Wolf, Sean Sweeney, Natalie Kay Harada, Rachel Dianne Harada, Jim O'Connor, Brett Sweeney, and Brett Christensen (collectively, the "Plaintiffs") bring this class action complaint against Defendant National Collegiate Athletic Association ("NCAA"), individually and on behalf of all others similarly situated, and complain and allege upon personal knowledge as to themselves and their own acts and experiences, and, as to all other matters, upon information and belief, including investigation conducted by their attorneys.

## **I. NATURE OF THE ACTION**

### **1. President Obama January 2013:**

I'm a big football fan, but I have to tell you if I had a son, I'd have to think long and hard before I let him play football. And I think that those of us who love the sport are going to have to wrestle with the fact that it will probably change gradually to try to reduce some of the violence. In some cases, that may make it a little bit less exciting, but it will be a whole lot better for the players, and those of us who are fans maybe won't have to examine our consciences quite as much.

I tend to be more worried about college players than NFL players in the sense that the NFL players have a union, they're grown men, they can make some of these decisions on their own, and most of them are well-compensated for the violence they do to their bodies. You read some of these stories about college players who undergo some of these same problems with concussions and so forth and then have nothing to fall back on. That's something that I'd like to see the NCAA think about.

2. The NCAA controls and regulates every aspect of the game of football and other college sports including rules regarding player safety and health. The NCAA has used this authority to compel all players and participants to follow the policies, rules, and regulations the NCAA has enacted and imposed. As the governing body of college athletics, the NCAA has held itself out as the guardian and authority on the issue of player safety and has unilaterally shouldered for itself a common law duty to provide players with rules, information, and best practices that protect them as much as possible from short-term and long-term health risks.

3. The NCAA was founded “to protect young people from the dangerous and exploitive athletics practices of the time.”<sup>1</sup> According to the NCAA, “[t]he rugged nature of early-day football, typified by mass formations and gang tackling, resulted in numerous injuries and deaths,” prompting President Theodore Roosevelt to convene two White House conferences with college athletics leaders to encourage safety reforms. As a result of several subsequent meetings of colleges and universities to initiate changes in football playing rules to protect the safety of student-athletes, 62 higher-education institutions became charter members of the original NCAA, then called the Intercollegiate Athletic Association of the United States (IAAUS).<sup>2</sup>

4. The NCAA’s founding purpose to protect student-athletes has been repeated often, and as far back as 1909 at the annual convention of member institutions. There, Chancellor James Roscoe Day of Syracuse University stated:

The lives of the students must not be sacrificed to a sport. Athletic sports must be selected with strict regard to the safety of those practicing them. It must be remembered that the sport is not the end. It is incidental to another end far more important. We lose sight of both the purpose and the proportion when we sacrifice the student to the sport.<sup>3</sup>

5. The NCAA’s role as the guardian of player health and safety has continued throughout the last century, and continues up through the present day. The NCAA has exercised that role through its unilateral decisions to issue rules to improve upon NCAA football’s public

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<sup>1</sup> <http://www.ncaa.org/wps/wcm/connect/public/ncaa/about+the+ncaa/history> (last updated Aug. 13, 2012). The Intercollegiate Athletic Association of the United States changed its name to the National Collegiate Athletic Association in 1910. *Id.*

<sup>2</sup> *Id.*

<sup>3</sup> James Roscoe Day, Chancellor, Syracuse University, *The Function of College Athletics*, in *PROCEEDINGS OF THE FOURTH ANNUAL CONVENTION OF THE INTERCOLLEGIATE ATHLETIC ASSOCIATION OF THE UNITED STATES* (Dec. 28, 1909), 34-43, at 38, *available at* <http://google.com/books?id=dh0LAAAAIAAJ>.

acceptance, to regulate the way in which games are played, to make a profit, and to address issues of player safety. During these decades, the NCAA voluntarily provided teams and players with information and extensive regulations that directly affected the short and long-term health of NCAA players, including the Plaintiffs.

6. Over the years the NCAA has assumed a duty to make sure that athletic programs are conducted in a manner “designed to protect and enhance the physical and educational well-being of the student athlete.” The NCAA’s website provides that “its core mission is to provide student athletes with a competitive environment that is safe” and that the NCAA itself takes “protective steps” with respect to student-athletes’ health and safety.”

7. Despite the NCAA’s assumption of this responsibility, the NCAA was negligent and failed to carry out this duty in that it failed to implement regulations that would properly protect student-athletes from the risks associated with concussions and/or manage those risks to properly respond to the medically proven fact that repetitive concussions would lead to neuro-cognitive injuries in many players, including the Plaintiffs.

8. The NCAA was aware that the number of concussions was increasing and occurring over a broad range of sports. Its five year estimates of the number of concussions in NCAA sports: (1) 16,000 for football; (2) 5,751 for women’s soccer; (3) 3,374 for men’s soccer; and (4) 1,209 for women’s volleyball.<sup>4</sup> Although public attention focused on concussions in football, large numbers of female athletes in particular were being concussed in sports such as soccer, basketball, lacrosse and volleyball. Further, the NCAA suppressed and kept secret from student-athletes, information about the extent of concussion injuries in NCAA sports and their long-term consequences.

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<sup>4</sup> NCAA10091830.

9. The NCAA was aware of the health risks associated with repetitive blows producing sub-concussive and concussive results and the fact that some members of the NCAA athlete population were at significant risk of developing brain damage and cognitive decline as a result. Despite its knowledge and controlling role in governing player conduct on and off the field, the NCAA turned a blind eye to the risk and failed to timely and adequately impose safety regulations governing this health and safety problem.

10. While the NCAA has assumed voluntarily its role as the unilateral guardian of player safety, college athletes and their families, including the Plaintiffs, have looked to the NCAA for guidance on player-safety issues. Student-athletes are 18 when they begin their athletic careers and are not on equal footing with the NCAA when it comes to understanding the importance of brain injury prevention and treatment.

11. In its supervisory role, as well as in its position as arbiter of all aspects of college athletics, the NCAA has, since its inception, unilaterally and voluntarily chosen how to spend its funds to investigate and regulate many different circumstances affecting player health and safety, including, but not limited to, requiring players to wear certain equipment, designating some player gear as illegal, deciding what helmet brands should be recognized as the official equipment of the NCAA.

12. As early as the 1980s the NCAA was aware of publications in the medical-science community establishing that concussive and sub-concussive injuries to athletes and the general population were a significant risk factor for short-term and long-term neuro-cognitive health complications, both as single incidents and particularly as repetitive impacts. By the year 2004 the NCAA was aware of over 20 scientific studies documenting the relationship between

concussions and brain injury. These studies recommended prevention and treatment regimens the NCAA ignored.

13. The NCAA has failed to meet its responsibility to safeguard student-athletes, despite being aware that its members have a “legal obligation to use reasonable care to protect athletes from foreseeable harm in any formal school sponsored activity.”<sup>5</sup> The NCAA has engaged in a long-established pattern of negligence and inaction with respect to concussions and concussion-related maladies sustained by its student-athletes, all the while profiting immensely from those same student-athletes.

14. Specifically, the NCAA has failed to timely address and/or correct the coaching of tackling, checking or playing methodologies that cause head injuries; the NCAA has failed to timely educate coaches, trainers and student-athletes as to the symptoms indicating possible concussions; the NCAA has failed to timely implement system-wide “return to play” guidelines for student-athletes who have sustained concussions; the NCAA has failed to implement system-wide guidelines for the screening and detection of head injuries; the NCAA has failed to implement legislation addressing the treatment and eligibility of student-athletes who have sustained multiple concussions in the course of play; and the NCAA has failed to implement a financial support system for student-athletes who, after sustaining concussions, are left unable to either – play their sport or even lead a normal life and who have continuing medical costs arising from participation in NCAA athletics.

15. On average, the NCAA makes over \$750 million in revenue each year and recently signed multi-billion-dollar television contracts for football games. Unlike professional sports organizations, however, the NCAA does not use revenues to pay its athletes, nor does the

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<sup>5</sup> NCAA10023685.

money go towards pension or medical benefits for post-collegiate athletes. Unlike professional athletes, student-athletes have no collective bargaining power to negotiate for such benefits. The NCAA gives no medical or financial support to collegiate student-athletes who sustained concussions while playing an NCAA sport and who are then left to cope with the necessary costs and care resulting from their injuries. The NCAA, however, retains the economic benefits resulting from the student-athletes' labors.

16. The NCAA's conduct is particularly egregious in light of the fact that its policies and procedures – or lack thereof – leave student-athletes like Plaintiffs and members of the Class inadequately protected from sustaining, monitoring and recovering from brain injuries at a particularly early and vulnerable point in their lives. Unlike professional athletes, who at least have resources to pay for medical care necessitated by head injuries caused during their professional careers, collegiate players typically range in age from 18-23 and are just beginning their adult lives. For such NCAA student-athletes, including Plaintiffs and the putative Class, these injuries can have long-term, debilitating effects, ranging from an inability to finish their education, to loss of memory, to depression, and early-onset dementia.

17. The NCAA was in a superior position to know of student-athletes' concussion-injury rates and the long-term medical consequences. The NCAA and its members breached its duty to provide a "safe environment" and by failing to provide long-term and/or complete medical coverage for student-athletes who suffered concussion(s) while playing NCAA sports.

18. Accordingly, this nation-wide class action seeks injunctive relief, and equitable relief in the form of medical monitoring for the purpose of diagnosis of long-term injury and disease resulting from concussions, as a result of the NCAA's carelessness, negligence, and concealment of information.

## **II. JURISDICTION AND VENUE**

19. This Court has original jurisdiction pursuant to 28 U.S.C. § 1332(d)(2). In the aggregate, Plaintiffs' claims and the claims of the other members of the Class exceed \$5,000,000 exclusive of interest and costs, and there are numerous Class members who are citizens of states other than the NCAA's states of citizenship.

20. Venue is proper in this district pursuant to 28 U.S.C. § 1391(b)(1), (2) and 1391(c) as: the NCAA is deemed to reside in this judicial district because it is subject to personal jurisdiction here; and a substantial part of the events and/or omissions giving rise to the claims emanated from activities within this jurisdiction and the Defendant conducts substantial business in this jurisdiction.

## **III. PARTIES**

### **A. Plaintiffs**

21. Abram Robert Wolf is a natural person and a citizen of the State of Iowa. Wolf currently attends Simpson College in Indianola, Iowa, where he is expected to graduate in May 2016. He has played on the school football team since he was a freshman in the fall of 2012. While playing football at Simpson College, Wolf has suffered at least two concussions and is in need of medical monitoring.

22. Natalie Kay Harada is a natural person and a citizen of the State of Iowa. Natalie Harada currently attends Maryville University in St. Louis, Missouri, where she is expected to graduate in May 2017. She has played on the school soccer team since she started as a freshman in 2013. While playing soccer at Maryville University, Natalie Harada has experienced the symptoms of a concussion, including but not limited to ringing in the ears and headaches, as a result of heading the ball and player contact and is in need of medical monitoring.

23. Rachel Dianne Harada is a natural person and a citizen of the State of Iowa. Harada is currently a junior and attends New York Institute of Technology, where she has played on the soccer team since 2013. For her freshman and sophomore years, Harada attended Northwest Missouri State University, where she played on the soccer team also. On multiple occasions while playing soccer at both New York Institute of Technology and Northwest Missouri State University, Rachel Harada has experienced the symptoms of a concussion, including but not limited to blurred vision and dizziness, as a result of heading the ball and player contact. As a result of her symptoms, Rachel Harada has had to be pulled out of games and is in need of medical monitoring.

24. Sean Sweeney is a natural person and a citizen of the State of Iowa. Sean Sweeney attended Buena Vista College, an NCAA member school, where he competed on the wrestling team from 1991-1993. Sweeney suffered one or more concussions and sub-concussive hits and is in need of medical monitoring.

25. Jim O'Connor is a natural person and a citizen of the State of Iowa. O'Connor attended Drake University, an NCAA member school, where he played football from 1971-74. O'Connor suffered one or more concussions and sub-concussive hits and is in need of medical monitoring.

26. Brett Sweeney is a natural person and a citizen of the State of Iowa. Brett Sweeney attended Waldorf College from 1986-87 and Buena Vista College from 1988-1990. Brett Sweeney competed on the wrestling teams at both NCAA-member schools. Brett Sweeney suffered one or more concussions and sub-concussive hits and is in need of medical monitoring.

27. Brett Christensen is a natural person and a citizen of the State of Iowa. Christensen attended Buena Vista College, an NCAA member school, where he competed on the

wrestling team from 1989-1993. Christensen suffered one or more concussions and sub-concussive hits and is in need of medical monitoring.

28. With respect to the Plaintiffs, *inter alia*, the NCAA failed to implement system-wide "return to play" guidelines for student-athletes who have sustained concussions. The NCAA failed to adequately educate and adopt rules requiring the education of coaches, staff and athletes about the symptoms and dangers of concussions. Moreover, the NCAA failed to implement system-wide guidelines for screening and detecting head injuries that would have detected the numerous concussions Plaintiffs received and prevented them from playing until they had fully recovered.

29. The NCAA did not require its members to properly educate its student-athletes as to the true symptoms of when a concussion can occur. Without such knowledge, requiring student-athletes to report symptoms is meaningless.

30. The Plaintiffs are just examples of thousands of athletes that suffer concussions and are returned to play symptomatic or are returned to play before they have fully recovered from their concussion.

#### **B. Defendant**

31. Defendant National Collegiate Athletic Association is an unincorporated association that acts as the governing body of college sports. Its principal office is located in Indianapolis, Indiana. According to its website, the NCAA oversees 88 championships in 23 sports. There are more than 400,000 student-athletes competing in three divisions at over 1,000 colleges and universities within the NCAA. Through various licensing programs, the NCAA takes in, on average, over \$750 million in revenues each year.

#### IV. FACTUAL BACKGROUND

##### A. The NCAA Had a Duty to Protect and Safeguard Student-Athletes

32. College athletics at NCAA member institutions are tightly regulated by the NCAA Constitution, Operating Bylaws, and Administrative Bylaws, which comprise over 400 pages of detailed rules that govern in great detail all matters relating to athletic events, including: player well-being and safety, playing time and practice rules for each sport, contest rules, amateurism, recruiting, eligibility, and scholarships.

33. The NCAA Constitution, Bylaws, and other legislative policies are contained within the NCAA Manual, which is updated at an annual conference and published annually for member schools.<sup>6</sup> The NCAA promulgates sport-specific standards through its Playing-Rules Committees, which write the rules for fifteen of the twenty-three men's and women's sports that it regulates.<sup>7</sup> The playing-rules committees are comprised primarily of coaches, who act as consultants to the Association in the event that any "major changes" to the rules are considered. However, the primary responsibility for developing and interpreting the rules falls to the secretary-rules editor.

34. The NCAA also publishes a Sports Medicine Handbook (the "*Handbook*"), which includes policies and guidelines for the treatment and prevention of injury, as well as return-to-play instruction. The *Handbook* is also produced annually and sent directly to head athletic trainers, as well as various individuals at NCAA member institutions. It is not sent directly to the entire athletic trainer staff or to student-athletes, but it is made available online to athletics

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<sup>6</sup> See *Bowers v. NCAA*, 974 F. Supp. 459, 461 (D.N.J. 1997) (explaining NCAA Governing legislation).

<sup>7</sup> See NCAA, *Playing Rules*, <http://www.ncaa.org/wps/wcm/connect/public/Test/Issues/Issues+Landing+Page> (last visited June 17, 2012) (defining "playing rules" as "regulations governing recruiting, eligibility, financial aid, amateurism, and other such categories").

directors, senior administrators, faculty athletics representatives, other athletic trainers, student-athlete advisory committees at each member institution, and conference commissioners.<sup>8</sup>

1. **The NCAA Constitution declares that the NCAA will control intercollegiate sports to protect the physical and educational well-being of student-athletes.**

35. The NCAA Constitution clearly defines the NCAA's purposes and fundamental policies to include maintaining control over and responsibility for intercollegiate sports and student-athletes. The NCAA Constitution states in pertinent part:

The purposes of this Association are:

(a) To initiate, stimulate and improve intercollegiate athletics programs for student athletes....;

(b) to uphold the principal of institutional control of, and responsibility for, all intercollegiate sports in conformity with the constitution and bylaws of this association;....

NCAA Const., Art.1, § 1.2(a),(b). The NCAA Constitution also defines one of its "Fundamental Policies" as the requirement that "Member institutions shall be obligated to apply and enforce this legislation, and the enforcement procedures of the Association shall be applied to an institution when it fails to fulfill this obligation."<sup>9</sup>

36. Article 2.2 of the NCAA Constitution specifically governs the "Principle of Student-Athlete Well-Being," and provides in pertinent part:

**2.2 THE PRINCIPLE OF STUDENT-ATHLETE WELL-BEING**

Intercollegiate athletics programs shall be conducted in a manner designed to protect and enhance the physical and educational well-being of student-athletes. (*Revised: 11/21/05.*)

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<sup>8</sup> *Id.*

<sup>9</sup> NCAA Const., Art. 1, § 1.3.2.

**2.2.3 Health and Safety.** It is the responsibility of each member institution to protect the health of, and provide a safe environment for, each of its participating student-athletes. *(Adopted: 1/10/95.)*

37. In fact, the NCAA Constitution mandates that “each member institution must establish and maintain an environment in which a student-athlete’s activities are conducted as an integral part of the student-athlete’s educational experience.” NCAA Const., Art. 2, § 2.2.1 *(Adopted: 1/10/95).*

38. To aid member institutions with the tools that they need to comply with NCAA legislation, the NCAA Constitution promises that “[t]he Association shall assist the institution in its efforts to achieve full compliance with all rules and regulations....”<sup>10</sup>

2. **The NCAA has publicly acknowledged its duty to protect the health and safety of student-athletes.**

39. The NCAA has consistently recognized its duty to provide a safe environment for student-athletes. For example, the NCAA’s website states: “Part of the NCAA’s core mission is to provide student-athletes with a competitive environment that is safe and ensures fair play. While each school is responsible for the welfare of its student-athletes, the NCAA provides leadership by establishing safety guidelines, playing rules, equipment standards, drug testing procedures and research into the cause of injuries to assist decision making. By taking proactive steps to student-athletes’ health and safety, we can help them enjoy a vibrant and fulfilling career.”<sup>11</sup>

40. Thus, the NCAA maintains The Committee on Safeguards and Medical Aspects of Sports, which is publicly touted by the NCAA as “serv[ing] to provide expertise and

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<sup>10</sup> NCAA Const., Art. 2, § 2.8.2.

<sup>11</sup> <http://www.ncaa.org/wps/wcm/connect/public/NCAA/Health+and+Safety/index.html> (last visited Jan. 31, 2013).

leadership to the NCAA in order to provide a healthy and safe environment for student-athletes through research, education, collaboration and policy development.”<sup>12</sup>

41. The NCAA promises its athletes a safe environment as recently as August 27, 2012, where its website states:

The NCAA takes appropriate steps to modify safety guidelines, playing rules and standards to minimize those risks and provide student athletes with the best opportunity to enjoy a healthy career. The injury surveillance program collects, analyzes, interprets and disseminates data on injuries in each sport, providing a wealth of information through which we can provide athletes with a safe competitive environment.

42. One of the NCAA’s “core concepts and priorities” was to use its knowledge to promote health and safety:

The NCAA has been conducting injury surveillance for more than 20 years. Over time, the underlying principle of the program has remained unchanged – to promote and support student athlete health and safety.<sup>13</sup>

43. In fact, the NCAA explains on its website how it promises to use the injury surveillance data it collects:

How does [the injury surveillance data] help prevent sports injuries?

Once we know how they occur we can take the necessary steps to reduce student-athletes’ exposure to situations that cause injuries. For instance, we can make adjustments to rules – such as eliminating tackling techniques in football or high-sticking in ice hockey – to reduce situations that expose student-athletes to high risks of injury. Or we can adjust equipment requirements and standards to increase safety.<sup>14</sup>

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<sup>12</sup> <http://www.ncaa.org/wps/wcm/connect/public/NCAA/Health+and+Safety/Sports+Injuries/>.

<sup>13</sup> NCAA10107716.

<sup>14</sup> <http://www.ncaa.org/wps/wcm/connect/public/NCAA/Health+and+Safety/Sports+Injuries/>.

3. **The NCAA promulgates annual guidelines for the protection of student-athletes' health and well-being.**

44. On an annual basis, the NCAA Committee on Competitive Safeguards and Medical Aspects of Sports publishes ("Medical Committee") the NCAA Sports Medicine Handbook ("Handbook") "to formulate guidelines for sports medicine care and protection of student-athletes' health and safety" and "to assist member schools in developing a safe intercollegiate athletic program"<sup>15</sup> The Medical Committee recognizes that the Handbook "may constitute some evidence of the legal standard of care." The Handbook expressly recognizes that "student-athletes *rightfully assume* that those who sponsor intercollegiate athletics have taken reasonable precautions to minimize the risks of injury from athletics participation."<sup>16</sup>

45. In discussing the "Shared Responsibility for Intercollegiate Sports Safety," the NCAA states that:

In an effort to do so [i.e. take reasonable precautions to minimize the risks of injury from athletics participation], the NCAA collects injury data in intercollegiate sports. When appropriate, the NCAA Committee on Competitive Safeguards and Medical Aspects of Sports makes recommendations to modify safety guidelines, equipment standards, or a sport's rules of play.<sup>17</sup>

46. Thus, the NCAA has described, time and again, its responsibility for the health and well-being of student-athletes.

#### **B. A Primer on Concussions**

1. **Concussions and what they cause.**

47. The brain is made of soft tissue and is cushioned by spinal fluid. It is encased in the hard, protective skull. When a person gets a head injury, the brain can slosh around inside

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<sup>15</sup> The 2010-11 NCAA Sports Medicine Handbook, at 2.

<sup>16</sup> *Handbook*, at 4 (emphasis added).

<sup>17</sup> *Handbook*, at 4.

the skull and even bang against it. This can lead to bruising of the brain, tearing of blood vessels, and injury to the nerves. When this happens, a person can get a concussion – a temporary loss of normal brain function.

48. Concussions and other brain injuries are fairly common. One of the most common reasons people get concussions is through a sports injury. High-contact sports such as football, boxing, soccer, and hockey pose a higher risk of head injury, even with the use of protective headgear:

## School of hard knocks

A concussion occurs when a violent blow to the head causes the brain to slam against the skull beyond the ability of the cerebrospinal fluid to cushion the impact. Between 1996 and 2001, NFL teams reported nearly 900 concussions.

**1** When a football player takes a hit to the head, speeds range from 17 to 25 miles per hour with a force averaging 98 times the force of gravity.

**2** The shock wave passes through the brain and bounces back off the skull. The concussion usually occurs at the opposite side from the point of impact.

**3** The impact can cause bruising of the brain, tearing of blood vessels and nerve damage.

A study commissioned by the NFL revealed most hits occurred from a blow to the side of the head, often on the lower half of the face.

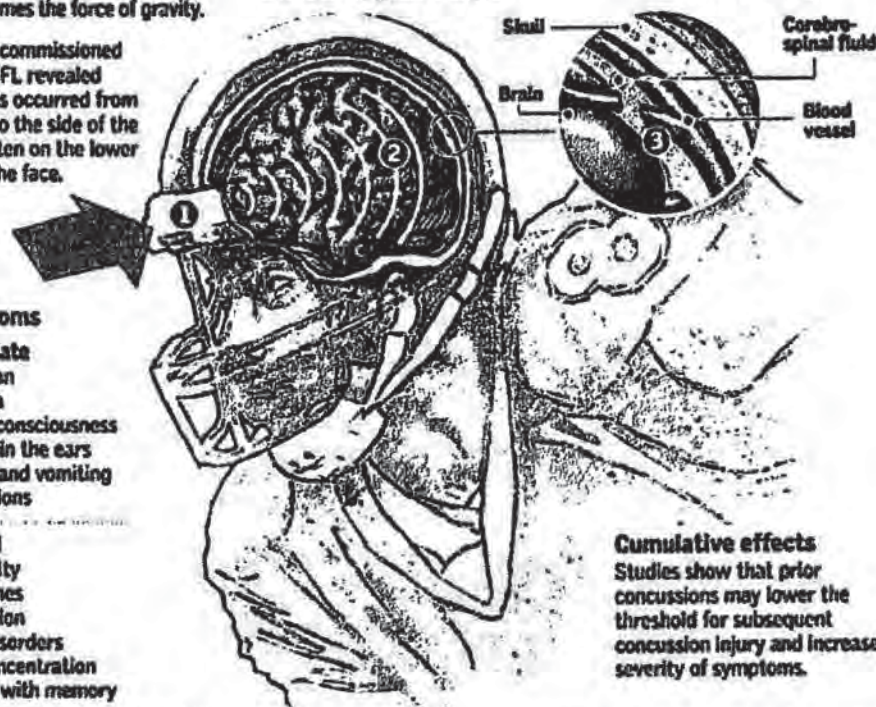
### Symptoms

Immediate  
Confusion  
Amnesia  
Loss of consciousness  
Ringing in the ears  
Nausea and vomiting  
Convulsions

### Delayed

Irritability  
Headaches  
Depression  
Sleep disorders  
Poor concentration  
Trouble with memory

Sources: MayoClinic.com, Biokinetics, Washington Post, Science Daily, kidshealth.org, Kaiser Permanente



### Cumulative effects

Studies show that prior concussions may lower the threshold for subsequent concussion injury and increase severity of symptoms.

Andrew Lucas, Jeff Gortzen | The Denver Post

49. Men are more likely to get concussions than women. However, in certain sports, like soccer, girls have a higher potential for concussion. Below is a depiction of how a concussion occurs in athletics:

### IMPACT OF CONCUSSION ON ATHLETE'S BRAIN

A concussion is a brain injury caused by a bump, blow or jolt to the head. Symptoms can appear right away or days later. A severe concussion has a dangerous cumulative effect and can cause debilitating memory loss, chronic headaches and clinical depression.

#### What happens

In a severe concussion, forces can twist and break the long, slender axons of brain cells.



Fluid surrounding the brain can fail to protect blood vessels and nerves from damage.



Impact can be almost 100 times the force of gravity.



50. The Brain Injury Association of America and the Centers for Disease Control and Prevention estimate that up to 3.8 million sports- and recreation-related concussions occur in the United States each year. That makes concussions the most common type of brain injury.<sup>18</sup> The reason for the frequency is due to the brain's somewhat precarious placement within the skull. Surrounded by fluid, it is normally suspended within the skull's bony structure. In everyday activity, this fluid is sufficient to protect the brain from crashing against the skull, but there is a low threshold of impact necessary to cause damage, and athletes, in particular, frequently induce

<sup>18</sup> Interview: Concussions, An Overlooked Epidemic, Interview by Diane Rehm with Dr. Gerard Gioia, Children's National Medical Center, in Washington, DC (Sept. 12, 2011), transcript available at <http://thedianerehrnshow.org/shows/2011-09-12/concussions-overlooked-epidemic/transcript>.

this threshold.<sup>19</sup> For example, when an athlete sustains a sudden blow to the head, or if the head whips around too quickly, the brain is jolted within the surrounding fluid, and knocked against the inside of the skull.

51. Some experts have described the impact of a concussion with more vivid analogies. Kevin Guskiewicz, of the University of North Carolina's Sports Concussion Research Program, compared the impacts sustained in a routine college football practice to crashing a car: "If you drove your car into a wall at twenty-five miles per hour and you weren't wearing your seat belt, the force of your head hitting the windshield would be around 100 gs: in effect, the player [who sustained two hits above 80-gs,] had two car accidents that morning."

52. The Institute for Preventative Sports Medicine likens the effect to mashing up Jell-O:

Put a piece of saran wrap over a bowl of jello [*sic*] .... That jello [*sic*] is your brain. Now shake the bowl pretty vigorously. You see the bits of jello [*sic*] stuck to the sides of the bowl and the saran wrap? That's the bruising that occurs, the tearing of the nerve tissue. That's how folks get injured.<sup>20</sup>

53. Both analogies emphasize the severity of the impact on the brain. As Dr. Bennet Omalu, co-founder of the Brain Injury Research Institute at West Virginia University notes, "there is no such thing as a mild concussion."<sup>21</sup>

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<sup>19</sup> See *id.* (describing how the brain is "floating around in fluid and it's not anchored" in the skull).

<sup>20</sup> Alexander Hecht, Article, *Legal and Ethical Aspects of Sports-Related Concussions: The Merril Hoge Story*, 12 SETON HALL J. SPORTS & ENT. L. 17, 23 (2002).

<sup>21</sup> Associated Press, *Expert: Bench Youths After Concussions*, ESPN (Feb. 1, 2010, 9:29 PM), <http://sports.espn.go.com/ncf/news/story?id=4877480>. Dr. Benet Omalu, a major neuropathologist, who is researching athletes and chronic traumatic encephalopathy (CTE) has testified before the House Judiciary Committee in hearings on head injuries in sports. *Id.*

**2. Signs and symptoms of concussions.**

54. The general public, including student-athletes, may not recognize the signs of a concussion. And because of that, student-athletes may put themselves at risk for another injury. For example, players may return to a game before they should, thinking nothing is wrong. That is a problem because if a player's brain has not healed properly from a concussion and the player then receives another brain injury (even if it is with less force), it can be serious.

55. Repeated injury to the brain can lead to swelling, and sometimes people develop long-term disabilities, or even die, as a result of serious head injuries. It is therefore very important to recognize and understand the signals of a concussion.

56. Although a concussion is commonly perceived as causing loss of consciousness (passing out), a person can have a concussion and never lose consciousness.

57. As college coaches, trainers, and the NCAA know or should know, symptoms of a concussion may include:

- “seeing stars” and feeling dazed, dizzy, or lightheaded;
- memory loss, such as trouble remembering things that happened right before and after the injury;
- nausea or vomiting;
- headaches;
- blurred vision and sensitivity to light;
- slurred speech or saying things that don't make sense;
- difficulty concentrating, thinking, or making decisions;
- difficulty with coordination or balance (such as being unable to catch a ball or other easy tasks);
- feeling anxious or irritable for no apparent reason; or
- feeling overly tired.

**3. Second-Impact Syndrome.**

58. When athletes who have sustained a concussion return to competition too soon, they risk the occurrence of Second-Impact Syndrome ("SIS"), a condition that can be instantly fatal.<sup>22</sup> SIS occurs when an athlete sustains a second blow to the head before the symptoms from the first concussion have subsided, or before the brain has fully recovered. The second injury may occur within minutes, days, or even weeks after the first, and still have a devastating effect.

59. Even a relatively light hit, if sustained during this vulnerable post-concussion period, may spark the onset of SIS. The second impact causes rapid swelling of the brain, resulting in cerebral edema. When the brain swells, the pressure inside the skull increases, preventing blood flow to the brain and decreasing the brain's essential oxygen levels.<sup>23</sup>

**4. What doctors do.**

60. If a doctor suspects that someone may have a concussion, he or she will ask about the head injury – such as how it happened and when – and the symptoms. The doctor may ask what seem like silly questions – things like "Who are you?" or "Where are you?" or "What day is it?" and "Who is the president?" Doctors ask these questions to check the person's level of consciousness and memory and concentration abilities.

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<sup>22</sup> See *AAN Statement, supra* n.**Error! Bookmark not defined.**, at 581 (recognizing cumulative damage of multiple concussions); *Handbook, supra* ¶ 37, at 53 ("There are potentially serious complications of multiple or severe concussions, including second impact syndrome, postconcussive syndrome, or post-traumatic encephalopathy"); see also Sean Gregory, *Study: Kids Competing Too Soon After Concussions*, TIME (Jan. 21, 2009), <http://www.time.com/time/magazine/article/0,9171,1873131,00.html> (reporting on concussion study by the Center for Injury Research and Policy at Nationwide Children's Hospital that found half of concussed student-players returned too soon to play).

<sup>23</sup> See *Brain and Nervous System Health Center: Brain Swelling*, WebMD, <http://www.webmd.com/brain/brain-swelling-brain-edema-intracranial-pressure?print=true> (last updated Mar. 2, 2010) (describing brain swelling).

61. The doctor will perform a thorough examination of the nervous system, including testing balance, coordination of movement, and reflexes. The doctor may ask the patient to do some activity such as running in place for a few minutes to see how well the brain functions after a physical workout.

62. Sometimes a doctor may order a CT scan (a special brain X-ray) or an MRI (a special non-X-ray brain image) to rule out bleeding or other serious injury involving the brain.

63. If the concussion is not serious enough to require hospitalization, the doctor will give instructions on what to do at home, like having someone wake the person up at least once during the night. If a person with a concussion cannot be easily awakened, becomes increasingly confused, or has other symptoms such as vomiting, it may mean there is a more severe problem that requires contacting the doctor again.

64. The doctor will probably recommend that someone with a concussion take acetaminophen or other aspirin-free medications for headaches. The person also will have to take things easy at school or work.

**5. After a concussion.**

65. After a concussion, the brain needs time to heal until all symptoms of a concussion have cleared up before returning to normal activities. The amount of time someone needs to recover depends on how long the symptoms last. Healthy teens can usually resume their normal activities within a few weeks, but each situation is different. A doctor should monitor the athlete closely to make sure it is appropriate to return to the game.

66. Someone who has had a concussion and has not recovered within a few months is said to have post-concussion syndrome. The person may have the same problems described earlier – such as poor memory, headaches, dizziness, and irritability – but these will last for longer periods of time and may even be permanent.

67. If someone has continuing problems after a concussion, the doctor may refer him or her to a rehabilitation specialist for additional help.

**C. Long-Term Effects**

68. Concussions are often defined as “a head injury with a temporary loss of brain function,” but recent studies and testimonies show that the loss of brain function is far from temporary. Although the precise long-term effects of concussions are unknown, research has revealed a significant correlation between generally decreased cognitive function and participation in contact sports. This revelation has led to a proactive response from many current and former athletes who believe in the profound significance of what the studies have revealed, because they have experienced it themselves: “repeated concussions can, some twenty years after the fact, have devastating consequences if left unrecognized and untreated.”

69. The two major contemporary studies of the long-term effects of concussions have been conducted by Boston University’s Center for the Study of Traumatic Encephalopathy and the Brain Injury Research Institute. These studies have revealed the “devastating consequences” of repeated concussions, including an increased risk of depression, dementia, and suicide. Further, the studies have demonstrated the physiological effect of multiple hits on the brain, manifested by red flecks of protein deposits on the brain called chronic traumatic encephalopathy (“CTE”). Generally, these proteins appear when the brain is hit, and disappear as healthy brain cells devour them, leading to recovery. Yet, when the brain suffers too many blows, the brain cells cannot keep up with the protein and eventually give up and die, leaving just the red flecks associated with CTE.

70. Between 2002 and 2007, Dr. Omalu, of the Brain Injury Research Institute, examined the brains of five former NFL players: Andre Waters, Mike Webster, Terry Long, Justin Strzelcyyk, and Damien Nash. Waters and Nash killed themselves; Webster, homeless

and cognitively impaired, died of heart failure; Strzelczyk died driving the wrong way down a highway at ninety miles per hour. Four of the five brains showed “the telltale red flecks of abnormal protein” characteristic of CTE. Dr. McKee, of the Boston University Center has examined the brains of sixteen former athletes, and found CTE in all of them. Their research demonstrates how devastating multiple concussions are to the brain and to human function, and reiterates the need for concussion awareness, management, and prevention.

**D. Studies Ignored by the NCAA**

71. For decades, the NCAA has been aware that multiple blows to the head can lead to long-term brain injury, including, but not limited to, memory loss, dementia, depression, and CTE and its related symptoms.

72. In 1928, pathologist Harrison Martland described the clinical spectrum of abnormalities found in “almost 50 percent of fighters [boxers] ... if they ke[pt] at the game long enough” (the “Martland study”). The article was published in the *Journal of the American Medical Association*. The Martland study was the first to link sub-concussive blows and “mild concussions” to degenerative brain disease.

73. In 1937, the American Football Coaches Association published a report warning that players who suffer a concussion should be removed from sports demanding personal contact.

74. In 1948, the New York State Legislature created the Medical Advisory Board of the New York Athletic Commission for the specific purpose of creating mandatory rules for professional boxing designed to prevent or minimize the health risks to boxers. After a three year study, the Medical Advisory Board recommended, among other things, (a) an accident survey committee to study ongoing accidents and deaths in boxing rings; (b) two physicians at ring-side for every bout; (c) post-bout medical follow-up exams; (d) a 30-day period of no activity following a knockout and a medical follow up for the boxer, all of which was designed

to avoid the development of "punch drunk syndrome," also known at the time as "traumatic encephalopathy"; (e) a physician's prerogative to recommend that a boxer surrender temporarily his boxing license if the physician notes that the boxer suffered significant injury or knockout; and (f) a medical investigation of boxers who suffer knockouts numerous times.

75. The recommendations were codified as rules of the New York State Athletic Commission.

76. In or about 1952, the *Journal of the American Medical Association* published a study of encephalopathic changes in professional boxers.

77. That same year, an article published in the *New England Journal of Medicine* recommended a three-strike rule for concussions in football (*i.e.*, recommending that players cease to play football after receiving their third concussion).

78. In 1962, Drs. Serel & Jaros looked at the heightened incidence of chronic encephalopathy in boxers and characterized the disease as a "Parkinsonian" pattern of progressive decline.

79. A 1963 study by Drs. Mawdsley & Ferguson published in *Lancet* found that some boxers sustain chronic neurological damage as a result of repeated head injuries. This damage manifested in the form of dementia and impairment of motor function.

80. A 1967 study Drs. Hughes & Hendrix examined brain activity impacts from football by utilizing EEG to read brain activity in game conditions, including after head trauma.

81. In 1969 (and then again in the 1973 book entitled *Head and Neck Injuries in Football*), a paper published in the *Journal of Medicine and Science in Sports* by a leading medical expert in the treatment of head injuries, recommended that any concussive event with

transitory loss of consciousness requires the removal of the football player from play and requires monitoring.

82. In 1973, Drs. Corsellis, Bruton, & Freeman-Browne studied the physical neurological impact of boxing. This study outlined the neuropathological characteristics of "Dementia Pugilistica," including loss of brain cells, cerebral atrophy, and neurofibrillary tangles.

83. A 1975 study by Drs. Gronwall & Wrightson looked at the cumulative effects of concussive injuries in non-athletes and found that those who suffered two concussions took longer to recover than those who suffered from a single concussion. The authors noted that these results could be extrapolated to athletes given the common occurrence of concussions in sports.

84. In the 1960s and 70s, the development of the protective face mask in football allowed the helmeted head to be used as a battering ram. By 1975 the number of head and neck injuries from football that resulted in permanent quadriplegias in Pennsylvania and New Jersey lead to the creation of the National Football Head and Neck Registry, which was sponsored by the National Athletic Trainers Association and the Sports Medicine Center at the University of Pennsylvania.

85. In 1973, a potentially fatal condition known as "Second Impact Syndrome" – in which re-injury to the already concussed brain triggers swelling that the skull cannot accommodate – was identified. It did not receive this name until 1984. Upon information and belief, Second Impact Syndrome has resulted in the deaths of at least forty football players.

86. Between 1952 and 1994, numerous additional studies were published in medical journals including the *Journal of the American Medical Association*, *Neurology*, the *New England Journal of Medicine*, and *Lancet* warning of the dangers of single concussions, multiple

concussions, and/or football-related head trauma from multiple concussions. These studies collectively established that:

repetitive head trauma in contact sports, including boxing and football, has potential dangerous long-term effects on brain function;

encephalopathy (dementia pugilistica) is caused in boxers by repeated sub-concussive and concussive blows to the head;

acceleration and rapid deceleration of the head that results in brief loss of consciousness in primates also results in a tearing of the axons (brain cells) within the brainstem;

with respect to mild head injury in athletes who play contact sports, there is a relationship between neurologic pathology and length of the athlete's career;

immediate retrograde memory issues occur following concussions;

mild head injury requires recovery time without risk of subjection to further injury;

head trauma is linked to dementia;

a football player who suffers a concussion requires significant rest before being subjected to further contact; and,

minor head trauma can lead to neuropathological and neurophysiological alterations, including neuronal damage, reduced cerebral blood flow, altered brainstem evoked potentials and reduced speed of information processing.

87. In 1997, the NHL instituted a concussion policy that included baseline testing.

88. In the early 1980s, the Department of Neurosurgery at the University of Virginia published studies on patients who sustained MTBI and observed long-term damage in the form of unexpected cognitive impairment. The studies were published in neurological journals and treatises within the United States.

89. In 1982, the University of Virginia and other institutions conducted studies on college football teams that showed that football players who suffered MTBI suffered

pathological short-term and long-term damage. With respect to concussions, the same studies showed that a person who sustained one concussion was more likely to sustain a second, particularly if that person was not properly treated and removed from activity so that the concussion symptoms were allowed to resolve.

90. The same studies showed that two or more concussions close in time could have serious short-term and long-term consequences in both football players and other victims of brain trauma.

91. In 1986, Dr. Robert Cantu of the American College of Sports Medicine published *Concussion Grading Guidelines*, which he later updated in 2001.

92. By 1991, three distinct medical professionals/entities – Dr. Robert Cantu of the American College of Sports Medicine, the American Academy of Neurology, and the Colorado Medical Society – developed return-to-play criteria for football players suspected of having sustained head injuries.

93. On May 15, 2000, a third-party organization called “SoccerDocs” wrote in to the US Consumer Product Safety Commission highlighting serious concerns: “1. There is a high risk of sustaining a concussion in soccer. 2. Amateur soccer players generally perform significantly more poorly on cognitive tests than control groups. 3. Additional studies must be undertaken in key areas with a focus on children. 4. *Most importantly, preventative action can be taken now including: ... (b) Consideration of other measures such as stricter return to play guidelines; improvements in proper technique among players; and proper enforcement of rules limiting dangerous play.*”<sup>24</sup> The letter also highlights statistics demonstrating the high risk of sustaining a concussion in soccer and that “there is no doubt we need to gather additional data

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<sup>24</sup> NCAA00002631-NCAA00002642.

to complete the picture...For example, we do not know what levels of impact typically cause concussions...There is also a lack of knowledge about the symptoms which can be detected to identify concussion.”<sup>25</sup>

94. A 2001 report by Dr. Frederick Mueller that was published in the *Journal of Athletic Training* reported that a football-related fatality has occurred every year from 1945 through 1999, except for 1990. Head-related deaths accounted for 69% of football fatalities, cervical spinal injuries for 16.3%, and other injuries for 14.7%. High school football produced the greatest number of football head-related deaths. From 1984 through 1999, sixty-nine football head-related injuries resulted in permanent disability.

95. In November 2001, the first international symposium on concussion in sport was held in Vienna.<sup>26</sup> The goal was for a group of experts to provide recommendations for the improvement of safety and health of athletes who suffer concussive injuries. The consensus statement recommended return to play guidelines and that when a player shows ANY symptoms or signs of a concussion: “(1) the player should not be allowed to return to play in the current game or practice; (2) the player should not be left alone; and regular monitoring for deterioration is essential; (3) the player should be medically evaluated after the injury; (4) return to play must follow a medically supervised stepwise process.”<sup>27</sup>

96. The statement also recommended a return to play stepwise process as follows: “(1) no activity, complete rest. Once asymptomatic, proceed to level (2); (2) light aerobic exercise such as walking or stationary cycling; (3) sport specific training – for example, skating in hockey, running in soccer; (4) non contract training drills; (5) full contact after medical

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<sup>25</sup> NCAA00002632.

<sup>26</sup> NCAA00007999-8012.

<sup>27</sup> *Id.* at 8001.

clearance; (6) game play.” The statement also recommends education of athletes is “a mainstay of progress in this field.”<sup>28</sup>

97. The NCAA did not act on these recommendations.

98. Dr. Brian Halpern, the “Past President of the American Medical Society for Sports Medicine” wrote a letter to the NCAA announcing a shocking trend in field hockey – that neck and head injury and concussion percentages in field hockey games rank above 35%.<sup>29</sup> In the letter, Dr. Halpern officially requests that the NCAA look further into prevention of injuries above the neck in field hockey. *Id.* In particular, the letter states that “This is an extremely high percentage of injuries that are potentially disabling and possibly life threatening at times ... I’m surprised at the high percentage of injuries occurring in practices and games in field hockey gathered from your data of 2000-2002. The most interesting aspect of this letter is that it cites the NCAA’s own ISS data. Therefore, it is evident that others in the medical community had viewed the high concussion injury rates in college sports and were expressing their concern. Despite these concerns, the NCAA did not take any action.

99. Research studies were published in November, 2003 that were a collaboration of many top neurologists and experts in the field. They were research studies specific to NCAA athletics.<sup>30</sup> In sum, the “Acute Effects and Recovery Time” study was conducted because of the “lack of empirical data on recovery time following sport-related concussion” which “hampers clinical decision making about return to play after injury.”<sup>31</sup> The study concluded, and the NCAA was clearly on notice of, the fact that collegiate football players “may require several

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<sup>28</sup> *Id.* at 8002.

<sup>29</sup> NCAA00002758.

<sup>30</sup> NCAA00007837-7844; NCAA00007909-7915.

<sup>31</sup> *Id.* at 7837.

days for recovery of symptoms, cognitive dysfunction, and postural instability after concussion ... [f]urther research is required to determine factors that predict variability in recover time after concussion.” The context of the “Cumulative Effects” study was that “approximately 300,000 sport-related concussions occur annually in the United States, and the likelihood of serious sequelae may increase with repeated head injury.”<sup>32</sup> The study concluded that “players with a history of previous concussions are more likely to have future concussive injuries than those with no history; 1 in 15 players with a concussion may have additional concussions in the same playing season; and previous concussions may be associated with slower recovery of neurological function.” *Id.* Despite this knowledge, the NCAA did not implement a concussion management plan policy until 2010.

100. In 2004, a convention of neurological experts in Prague met with the aim of providing recommendations for the improvement of safety and health of athletes who suffer concussive injuries in ice hockey, rugby, football, and other sports based on the most up-to-date research. These experts recommended that a player never be returned to play while symptomatic, and coined the phrase, “when in doubt, sit them out.”

101. The NCAA released its injury surveillance data for the 2005-2006 football season and it showed high rates of concussions and head injuries.<sup>33</sup> Specifically, head injuries accounted for 11% of practice and 5% of game injuries. “Concussions ranked third highest in both practice and competition.” In addition, “a team averaging 60 game participants could expect one concussion every five games. Seven percent of all practice and game injuries involved concussions.”<sup>34</sup>

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<sup>32</sup> *Id.* at 7909.

<sup>33</sup> NCAA00002934-NCAA00002961.

<sup>34</sup> *Id.* at NCAA00002937-38.

102. The men's ice hockey injury surveillance data for 2005-2006 had similarly high rates of concussions and head injuries. Specifically, for practices in 2004-2005, concussions constituted 12% of all injuries and 7% of all injuries in 2005-2006. In addition, for games in 2004-2005, concussions constituted 16% of all injuries and 12% of all injuries in 2005-2006. Another figure in the NCAA release shows that head injuries accounted for 14% of all injuries in 2005-2006 and 17% of all injuries in 2004-2005. And, head injuries constituted 16% of all injuries in practices for the years 2004-2005 and 2005-2006.<sup>35</sup>

103. Finally, the 2005-2006 Injury Surveillance System report for men's soccer showed that concussions accounted for 6% of all competition injuries. Head injuries accounted for 11% and 12% of all injuries in 2005-2006 and 2004-2005 respectively.<sup>36</sup>

104. The University of North Carolina's Center for the Study of Retired Athletes published survey-based papers in 2005 through 2007 that found a strong correlation between depression, dementia, and other cognitive impairment in NFL players and the number of concussions those players had received.

105. A 2006 publication stated that "[a]ll standard U.S. guidelines, such as those first set by the American Academy of Neurology and the Colorado Medical Society, agree that athletes who lose consciousness should never return to play in the same game."

106. Since the early 1970s, the high incidence of concussions among student-athletes in many different sports, including football, hockey and soccer, has been well known to the NCAA. Further, based on studies that the NCAA *itself* paid for (as explained in detail below), the NCAA has been aware that a history of multiple concussions has been associated with greater risk of future brain defects in student-athletes, including symptoms of post-traumatic

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<sup>35</sup> NCAA00002962-NCAA00002980.

<sup>36</sup> NCAA00003000-NCAA00003019.

brain injury such as headaches, dizziness, loss of memory, impulse control problems, and Chronic Traumatic Encephalopathy.

107. Moreover, in the early 2000s, the NCAA specifically became aware of the correlation between concussions and depression, dementia, and early on-set Alzheimer's disease. Despite this knowledge, the NCAA failed to act reasonably by developing appropriate means to identify at-risk players and guidelines or rules regarding return to play criteria. The NCAA's inaction increased the risk of long-term injury and illness in student-athletes.

108. As early as in 2002, a prominent study published in the Archives of Clinical Neuropsychology entitled *Enduring Effects of Concussion in Youth Athletes* documented that there were enduring effects in youth who have experienced a history of two or more concussions.<sup>37</sup> These include decreased overall neuropsychological functioning, as well as decreased mental speed.

109. In 2003, the University of North Carolina, Chapel Hill, published a study, funded in part by the NCAA, which concluded that NCAA football players required an average of five to seven days after concussion for their cognitive functioning to return to normal.<sup>38</sup> The study concluded that *athletes required a full seven days after a concussion before completely regaining their pre-concussion abilities.*

110. Despite this knowledge, the NCAA continues to allow student-athletes to return to play the very next calendar day after sustaining a concussion. In practice, this means that a student-athlete can be back on the field less than 24 hours after sustaining a serious brain injury – thereby placing the student-athlete in serious medical jeopardy.

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<sup>37</sup> Moser, *et al.*, Archives of Clinical Neuropsychology, 17 (2002) 91-100.

<sup>38</sup> McCrea, *et al.*, *Acute Effects and Recovery Time Following Concussions in Collegiate Football Players, The NCAA Concussion Study*, JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, Vol. 290, No. 19, November 19, 2003, at 2561.

111. In another 2003 UNC-Chapel Hill study, again partially funded by the NCAA, the affects of multiple concussions sustained by a single athlete were examined.<sup>39</sup> The study found that NCAA football players who had a history of concussions are at an increased risk of sustaining additional future concussions, and that those student-athletes who had three previous concussions were at a three-fold greater risk of future concussions. The study recommended that athletes with a high cumulative history of concussions should receive more information about the increased risk of repeat concussions before deciding whether to continue to play football.

112. The study also concluded that the use of standardized assessment tools would assist medical staff in better determining how long student-athletes should rest before returning to play. Despite this knowledge, the NCAA has failed to implement any guidelines or rules pertaining to repeat concussions and failed to implement an educational program for athletes with a history of concussions who profess a desire to continue playing football.

113. But there is more. In 2005 UNC-Chapel Hill published a study that found a clear link between previous head injuries and the likelihood of developing mild cognitive impairment ("MCI") and early-onset Alzheimer's disease.<sup>40</sup> In fact, the study found that players with three or more reported concussions were five times more likely to develop MCI, three times more likely to develop significant memory problems, and possessed an overall higher likelihood of developing early on-set Alzheimer's disease. The NCAA did not even acknowledge the study, let alone act on it or even alert its student-athletes of these known risks.

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<sup>39</sup> Guskiewicz, *et al.*, *Cumulative Effects Associated With Recurrent Concussion in Collegiate Football Players*, *The NCAA Concussion Study*, THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, Vol. 290, No. 19, November 19, 2003, at 2549.

<sup>40</sup> Guskiewicz, *et al.*, *Association between recurrent concussions and late-life cognitive impairment in retired professional football players*, NEUROSURGERY, Vol. 50, October 2005, at 719.

114. Two years later, the NCAA ignored yet another UNC-Chapel Hill study, which found that recurrent concussions were linked to a heightened risk of depression in former football players.<sup>41</sup> The results of that study showed that former football players who sustained three or more concussions were three times more likely to be diagnosed with depression. Those with two or more concussions were one and one-half times more likely to be diagnosed with depression.

115. Further, it is well known that student-athletes in the NCAA are at risk for concussion. In 2010, a study from the University of North Carolina reported that men's hockey players suffered 1.47 concussions per 1,000 player hours. Women's college hockey was worse, with 2.72 concussions occurring for every 1,000 hours.<sup>42</sup>

116. At a 2010 Mayo Clinic conference on concussions, researchers discussed that concussions comprised about 25 percent of the injuries in women's ice hockey, the highest cause of injury in the sport. In men's ice hockey concussions account for 9 percent of the injuries (No. 2 in the sport), and in football they account for 7 percent (No. 3 in the sport).<sup>43</sup>

117. The NCAA also knows, but has ignored, that concussions are not limited to helmeted sports. A study conducted by McGill University in Montreal found that 60 percent of college soccer players reported symptoms of a concussion at least once during the season. The study also revealed that concussion rates in soccer players were comparable to those in football.

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<sup>41</sup> *Guskiewicz, et al., Recurrent concussions and risk of depression in retired professional football players*, MED. SCI. SPORTS EXERC., Vol. 39, June 2007, at 903.

<sup>42</sup> <http://www.hockeyprimetime.com/news/futures-watch/ncaa-hockeys-growing-headache>.

<sup>43</sup> <http://slapshot.blogs.nytimes.com/2010/10/19/at-the-mayo-clinic-womens-hockey-a-most-dangerous-game/>.

According to this study, athletes who suffered a concussion were four to six times more likely to suffer a second concussion.<sup>44/45</sup>

118. Consistent with the pattern described herein, the NCAA chose to ignore the fact that the mental health of student-athletes was at risk, implementing no policy or educational stance that would properly protect and/or inform the football players at risk.

**E. The NCAA's Inadequate Rules and Policies Regarding How the Games are Played**

119. In the early 1970s, rule-makers in the NCAA recognized that the use of the helmeted head as an offensive weapon was dangerous and was increasing the rate of concussions.

120. In 1976, the NCAA passed a rule prohibiting initial contact of the head in blocking and tackling in football.

121. Even after the football regulations of the 1970s were passed, however, football student-athletes continued to be coached and trained to use all portions of their helmets to block, tackle, butt, spear, ram and/or injure opposing players by hitting with their helmeted heads. While these techniques were *publicly* condemned by the NCAA, on a private level they were not meaningfully condemned by the NCAA. To date, the harshest penalty imposed on football coaches whose players were found to use the helmeted head to tackle was a letter of reprimand.

122. At the individual level, the penalties for student-athletes who make dangerous helmet-based tackles include being either ejected or suspended from play. But at the *team* level, teams are assessed only a 15-yard penalty for dangerous tackling. What is more, the stated

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<sup>44</sup> <http://www.aans.org/Patient%20Information/Conditions%20and%20Treatments/Sports-Related%20Head%20Injury.aspx>.

<sup>45</sup> <http://aans.org/en/Patient%20Information/Conditions%20and%20Treatments/Concussion.aspx>.

rationale behind these penalties has consistently been to protect *the player being tackled* without regard for the player *using* the helmet to make the tackle – as he was coached to do.

123. Despite its awareness of these dangerous practices and the increased risk of head injury to the players, during the 1970s, 1980s, 1990s and 2000s, the NCAA turned a blind eye to the players being coached and trained to use all portions of their helmet to block, tackle, butt, spear, ram and/or injure opposing players by hitting with their helmeted heads, and instead elevated its financial self-interest above the physical safety of its student-athletes.

124. Similarly, in hockey, inadequate guidance existed on hitting with the head in the NCAA. Finally, in 2010, the NCAA installed new rules in the hockey off-season to address the growing problem of concussions and head and neck injuries. As of the 2010-11 season, all hits to the head are supposed to be penalized by a five-minute major and the referee's option of a game misconduct or disqualification. A disqualification carries with it an automatic one-game suspension.

125. However, rules are only as effective as their enforcement. And, even today, the NCAA continues to turn a blind eye to the type of game play that causes concussions.

**F. The NCAA's Inadequate Concussion Treatment and Return to Play Rules**

**1. From 1994-2002, the NCAA refused to endorse any concussion grading scale or return-to-play criteria.**

126. Guideline 2o, "Concussions and Second Impact Syndrome," first appeared in the 1994-1995 NCAA Sports Medicine Handbook and largely remained the same through 2002. Rather than providing protection for student-athletes or a treatment protocol for member institutions, Guideline 2o largely left treatment to the individual team's discretion.

127. For example, while the 1998-99 version of Guideline 2o reported that "[c]oncussion and the resulting potential complications, such as second-impact syndrome, are

potentially life-threatening situations that student-athletes may suffer as a result of their athletics participation,” the NCAA stated that it “does not endorse any specific concussion grading scale or return-to-play criteria.” The NCAA left the discretion on return to play to the individual school.

128. Moreover, the NCAA did not enforce Guideline 2o’s statement that: “A student-athlete rendered unconscious for any period of time should not be permitted to return to the practice or game in which the head injury occurred. In addition, no student-athlete should be allowed to return to athletics activity while symptomatic.” Thus, Guideline 2o acted as a liability cover for the NCAA without any NCAA enforcement activity to actually protect student-athletes.

**2. The NCAA fails to adopt the guidelines promulgated by the 2001 Vienna Conference.**

129. In November 2001, the first International Symposium on Concussion in Sport was held in Vienna, Austria (“Vienna Conference”). The aim of the Vienna Conference was to provide recommendations for the improvement of safety and health of athletes who suffer concussive injuries in ice hockey, football (soccer), and other sports. Experts were invited “to address specific issues of epidemiology, basic and clinical science, grading systems, cognitive assessment, new research methods, protective equipment, management, prevention, and long-term outcome, and to discuss a unitary model for understanding concussive injury.”

130. The result of the Vienna Conference was the publication of an international consensus statement that was “a comprehensive systematic approach to concussion to aid the injured athlete and direct management decisions” (“Vienna Protocol”). The Vienna Protocol was intended to “be widely applicable to sport related concussion” and was “developed for use by doctors, therapists, health professionals, coaches, and other people involved in the care of injured

athletes, whether at the recreational, elite, or professional level.”<sup>46/47</sup> The Vienna Protocol includes direction with respect to each of the following areas in diagnosing and treating concussions: Clinical history; Evaluation; Neuropsychological testing; Imaging procedures; Research methods; Management and rehabilitation; Prevention; Education; Future directions; and Medicolegal considerations.<sup>48</sup>

131. In fact, the Vienna Protocol recommended specific internationally-accepted return to play guidelines, stating:

When a player shows ANY symptoms or signs of a concussion:

- (1) The player should not be allowed to return to play in the current game or practice.
- (2) The player should not be left alone; and regular monitoring for deterioration is essential.
- (3) The player should be medically evaluated after the injury.
- (4) Return to play must follow a medically supervised stepwise process.

A player should never return to play while symptomatic. “When in doubt, sit them out!”<sup>49</sup>

132. The Vienna Protocol also recommended an internationally-accepted return to play stepwise process as follows:

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<sup>46</sup> “Summary and agreement statement of the first International Conference on Concussion in Sport, Vienna 2001,” Br J Sports Med 2002;36:6-7 doi:10.1136/bjsm.36.1.6, available at <http://bjsm.bmj.com/content/36/1/6.full>.

<sup>47</sup> The NCAA possessed a copy of the Vienna Protocol. NCAA00007999-8012.

<sup>48</sup> *Id.*

<sup>49</sup> Summary and agreement statement of the first International Conference on Concussion in Sport, Vienna 2001,” Br J Sports Med 2002;36:6-7 doi:10.1136/bjsm.36.1.6, available at <http://bjsm.bmj.com/content/36/1/6.full>. See also NCAA 00007999, at 8001.

Return to play after a concussion follows a stepwise process:

- (1) No activity, complete rest. Once asymptomatic, proceed to level (2).
- (2) Light aerobic exercise such as walking or stationary cycling.
- (3) Sport specific training – for example, skating in hockey, running in soccer.
- (4) Non-contact training drills.
- (5) Full contact training after medical clearance.
- (6) Game play.

With this stepwise progression, the athlete should continue to proceed to the next level if asymptomatic at the current level. If any symptoms occur after concussion, the patient should drop back to the previous asymptomatic level and try to progress again after 24 hours.<sup>50</sup>

133. Despite the internationally-accepted consensus guidelines set forth in the Vienna Protocol, the NCAA did not revise the substance of Guideline 2o in the 2002-03 NCAA Sports Medicine Handbook, nor in the 2003-04 Sports Medicine Handbook. In fact, in both identical versions, the NCAA continued to state that there was a “current lack of consensus among the medical community on management of concussions [and thus] the NCAA does not endorse any specific concussion grading scale or return-to-play criteria.”<sup>51</sup> The NCAA’s position was directly contrary to the consensus set forth in the Vienna Protocol.

134. In the 2004-05 NCAA Sports Medicine Handbook, the NCAA replaced Guideline 2o with Guideline 2i, entitled “Concussion or Mild Traumatic Brain Injury (mTBI) in the Athlete.”<sup>52</sup> While Guideline 2i continued to recommend that students not be allowed to return to

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<sup>50</sup> *Id.*

<sup>51</sup> *See, e.g.*, NCAA000017196.

<sup>52</sup> NCAA00007098, at 7144-49.

play while symptomatic, the NCAA nonetheless approved of absolute discretion being left to the team and student-athlete on when a student should be allowed to return to play.<sup>53</sup> Guideline 2i, in both the 2004-05 and 2005-06 Handbooks, stated in pertinent part:

The duration of time that an athlete should be kept out of physical activity is unclear, and in most instances, individualized return to play decisions should be made. These decisions will often depend on the clinical symptoms, as well as previous history of concussion, and severity of previous concussions. Additional factors include the sport, position, age, support system for the athlete, and the overall "readiness" of the athlete to return to sport.<sup>54</sup>

135. The NCAA's position was, once again, contrary to the Vienna Protocol. In fact, the NCAA outright dismissed the Vienna Protocol in Guideline 2i, instead advocating for individual school decisions stating: "More recent grading systems have been published which attempt to take into account the expanding research in the field of mTBI in athletes. Though it is useful to become familiar with these guidelines, it is important to remember that many of these injuries are best treated in an individual fashion (Cantu '01, Vienna Conference, NATA '04)."

**3. The NCAA fails to adopt the guidelines promulgated by the 2004 Prague Conference.**

136. The 2nd International Symposium on Concussion in Sport was held in Prague, Czech Republic in November 2004 ("Prague Conference"), resulting in a revision and update of the Vienna Protocol ("Prague Protocol").<sup>55</sup> Building on the return to play guidelines in the Vienna Protocol, the Prague Protocol adopted the same stepwise process.

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<sup>53</sup> *Id.* at NCAA00007146-47.

<sup>54</sup> *Id.* at NCAA00007147.

<sup>55</sup> Summary and agreement statement of the 2nd International Conference on Concussion in Sport, Prague 2004, *Br J Sports Med* 2005; 39:196-204 doi:10.1136/bjsm.2005.018614 (Feb. 2005).

137. Despite the publication of the Prague Protocol in February 2005, the NCAA did not update its Guideline 2i in the 2006-07 Handbook – but repeated Guideline 2i from the prior years. The NCAA thus did not adopt the internationally-accepted guidelines set forth first in 2002 in the Vienna Protocol that were now reaffirmed in the 2005 Prague Protocol. Moreover, the NCAA failed to mandate that student-athletes with concussions be managed by doctors with a specific expertise in the management of such injuries, instead leaving all care to a school's "medical staff."

**4. The NCAA fails to adopt the guidelines promulgated by the 2008 Zurich Conference.**

138. The 3rd International Symposium on Concussion in Sport was held in Zurich, Switzerland in November 2008 ("Zurich Conference"), resulting in an update of the Vienna Protocol and Prague Protocol ("Zurich Protocol").<sup>56</sup>

139. Once again, the Zurich Protocol reaffirmed the need for a graduated stepwise return to play process after a concussion, with a 24-hour wait period between each step. The Zurich Protocol stated:

Return to play protocol following a concussion follows a stepwise process as outlined in table 1.

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<sup>56</sup> Consensus Statement on Concussion in Sport: the 3d International Conference on Concussion in Sport held in Zurich, November 2008, [http://bjsm.bmj.com/content/43/Suppl\\_1/i76.full.pdf+html](http://bjsm.bmj.com/content/43/Suppl_1/i76.full.pdf+html).

**Table 1**  
**Graduated return to play protocol**

Rehabilitation stage	Functional exercise at each stage of rehabilitation	Objective of each stage
1. No activity	Complete physical and cognitive rest	Recovery
2. Light aerobic exercise	Walking, swimming or stationary cycling keeping intensity <70% maximum predicted heart rate	Increase heart rate
	No resistance training	
3. Sport-specific exercise	Sliding drills in ice hockey, running drills in soccer. No head impact activities	Add movement
4. Non-contact training drills	Progression to more complex training drills, eg passing drills in football and ice hockey	Exercise, coordination, and cognitive load
	(May start progressive resistance training)	
5. Full contact practice	Following medical clearance participate in normal training activities	Restore confidence and assess functional skills by coaching staff
6. Return to play	Normal game play	

With this stepwise progression, the athlete should continue to proceed to the next level if asymptomatic at the current level. Generally each step should take 24 hours so that an athlete would take approximately one week to proceed through the full rehabilitation protocol once they are asymptomatic at rest and with provocative exercise. If any post-concussion symptoms occur while in the stepwise programme, the patient should drop back to the previous asymptomatic level and try to progress again after a further 24-hour period of rest has passed.<sup>57</sup>

140. The Zurich Protocol also reinforced that sport governing bodies, like the NCAA, may need to change their rules and/or enforce the rules in order to protect the well-being of athletes who suffer or show signs of concussions, stating:

Consideration of rule changes to reduce the head injury incidence or severity may be appropriate where a clear-cut mechanism is implicated in a particular sport. An example of this is in football (soccer) where research studies demonstrated that upper limb to head contact in heading contests accounted for approximately 50% of concussions. As noted earlier, rule changes may also be needed in some sports to allow an effective off-field medical assessment to occur without compromising the athlete's welfare, affecting the flow of the game or unduly penalising the player's team. It is important to note that rule enforcement may be a critical aspect of

<sup>57</sup> *Id.*

modifying injury risk in these settings; referees play an important role in this regard.<sup>58</sup>

141. Despite the publication of the Zurich Protocol in early 2009, the NCAA did not update its Guideline 2i in the 2009-10 Handbook – but repeated Guideline 2i from the prior years. The NCAA thus did not adopt the internationally-accepted guidelines set forth first in 2002 in the Vienna Protocol, as reaffirmed and explained in the 2005 Prague Protocol and the 2009 Zurich Protocol. In fact, the NCAA did not even discuss in its Guidelines the Prague or Zurich Protocols, but continued to repeat its dismissal of the Vienna Protocol: “More recent grading systems have been published which attempt to take into account the expanding research in the field of mTBI in athletes. Though it is useful to become familiar with these guidelines, it is important to remember that many of these injuries are best treated in an individual fashion (Cantu ’01, Vienna Conference, NATA ’04).”

**5. Too little, too late, the NCAA finally requires schools to have a concussion plan.**

142. As previously discussed, the NCAA Sports Medicine Handbook notes that “student-athletes rightfully assume that those who sponsor intercollegiate athletes have taken reasonable precaution to minimize the risks of injury from athletics.” This assumption is bolstered by the NCAA’s requirement of medical examination prior to participation and the requirement that each student-athlete should be covered by medical insurance.

143. The *Handbook*’s section on concussions cites to 17 references, dating back to 1991, all documenting the dangers of concussions and the need to carefully assess and treat student-athletes:

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<sup>58</sup> *Id.*

1. Cantu RC: Concussion severity should not be determined until all postconcussion symptoms have abated. Lancet 3:437-8, 2004.
2. Cantu RC: Recurrent athletic head injury: risks and when to retire. Clin Sports Med. 22:593-603, 2003.
3. Cantu RC: Post traumatic (retrograde/anterograde)) amnesia: pathophysiology and implications in grading and safe return to play. Journal of Athletic Training, 36(3): 244-8, 2001.
4. Centers for Disease Control and Prevention. Sports-related recurrent brain injuries: United States. MMWR Morb Mortal Wkly Rep 1997; 46:224-227.
5. Collie A, Darby D, Maruff P: Computerized cognitive assessment of athletes with sports related head injury. Br. J Sports Med 35(5):297-302, 2001.
6. Collins MW, Iverson GL, Lovell MR, McKeag DB, Norwig J, Maroon J: On-field predictors of neuropsychological and symptom deficit following sports-related concussion. Clin J Sport Med 2003; 13:222-229.
7. Collins MTV, Grindel SH, Lovell MR et al: Relationship Between Concussion and Neuropsychological Performance in College Football Players. JAMA 282:964-970, 1999.
8. Guskiewicz KM, Bruce SL, Cantu R, Ferrara MS, Kelly JP, McCrea M, Putukian M, McLeod-Valovich TC; National Athletic Trainers' Association Position Statement: Management of Sport-related Concussion: Journal of Athletic Training, 39(3): 280-297, 2004.
9. Guskiewicz KM: Postural stability assessment following concussion: One piece of the puzzle. Clin J Sport Med 2001; 11:182-189.
10. Hovda DA, Lee SM, Smith ML et al: The Neurochemical and metabolic cascade following brain injury: Moving from animal models to man. J Neurotrauma 12(5):143-146, 1995.
11. Johnston K, Aubry M, Cantu R et al: Summary and Agreement Statement of the First International Conference on Concussion in Sport, Vienna 2001, Phys & Sportsmed 30(2):57-63, 2002.

12. Lovell MR, Iverson GL, Collins MW et al: Does loss of consciousness predict neuropsychological decrements after concussion? *Clin J Sport Med* 9: 193-198, 1999.
13. Makdissi M, Collie A, Maruff et al: Computerized cognitive assessment of concussed Australian Rules footballers. *Br J Sports Med* 35(5):354-360, 2001.
14. McCrea M.: Standardized mental status assessment of sports concussion. *Clin J Sport med* 11(3):176-181, 2001.
15. McCrea A, Hammeke T, Olsen G, Leo, Guskiewicz K: Unreported concussion in high school football players. *Clin J Sport med* 2004;14:13-17.
16. McCrory P, Meeuwisse W, Johnston K, Dvorak J, Aubry M, Molloy M, Cantu R. Consensus Statement on Concussion in Sport: the 3rd International Conference on Concussion in Sport: Zurich, Switzerland, 2008. *Br J Sports Med* 2009;43: i76-i84.
17. Torg, JS: *Athletic Injuries to the Head, Neck, and Face*. St. Louis, Mosby-Year Book, 1991.

144. Despite this extensive knowledge of the danger of concussion, it was not until April 2010 that the NCAA passed legislation requiring its member schools to have a Concussion Management Plan ("CMP") in place for all sports. The NCAA did so in reaction to the NFL's concussion policy, as well as the significant liability incurred as a result of a lawsuit brought by an NCAA football player Preston Plevretes, who suffered catastrophic injury as a result of multiple concussions. The fact that the NCAA waited until nearly nine years after the first international consensus statement on concussions (and still did not meet the consensus standards) is no surprise. Historically, the NCAA has regulated on the basis of public perception,<sup>59</sup> and

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<sup>59</sup> See, e.g., *Cureton v. NCAA*, 198 F.3d 107, 110 (3d Cir. 1999) (implementing notorious student-athlete academic standards, including minimum GPA, number of core courses, and SAT score, for student-athlete eligibility "in response to the public's perception" that it was needed); see also NCAA History, *supra* n.156 (creating NCAA to quell public's concerns over violence in intercollegiate athletics).

courts have largely left the NCAA alone because of the Association's unique position of authority in intercollegiate athletics, and its worthy goal of preserving amateurism.<sup>60</sup>

145. However, rather than creating a system-wide policy that focused on the best interest of the student-athletes, the NCAA's so-called "plan" for concussion management relies on member schools to self-police their return-to-play policies. Further, the NCAA's plan put the onus of concussion management on the student-athletes by requiring that they "sign a statement in which they accept the responsibility for reporting their injuries and illnesses to the institutional medical staff, including signs and symptoms of concussions."<sup>61</sup> Specifically, the NCAA added the following text-box to Guideline 2i in the 2010-11 Sports Medicine Handbook:

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<sup>60</sup> In doing so, the NCAA has become almost "an extra-judicial entity, a society unto itself, answerable to no one ...." Mitchell Nathanson, *The Sovereign Nation of Baseball: Why Federal Law Does Not Apply to "America's Game" and How It Got That Way*, 16 Vill. Sports & Ent. L.J. 49, 52-3 (2009) (referring to MLB, which has been given "wide latitude" by federal courts and describing MLB as largely "free to govern itself pursuant to its own definition of what is in the best interests of baseball"). Similarly, federal courts been deferential to NCAA rules because of the Association's unique position of authority in intercollegiate athletics, and its worthy goal of preserving amateurism:

The NCAA plays a critical role in the maintenance of a revered tradition of amateurism in college sports. There can be no question but that it needs ample latitude to play that role, or that the preservation of the student-athlete in higher education adds richness and diversity to intercollegiate athletics and is entirely consistent with the goals of the Sherman Act.

*NCAA v. Bd. of Regents*, 468 U.S. 85, 120 (1984).

<sup>61</sup> NCAA Rule 3.2.4.17 (available at <http://www.ncaapublications.com/productdownloads/D112.pdf>).

**The NCAA Executive Committee adopted (April 2010) the following policy for institutions in all three divisions.**

"Institutions shall have a concussion management plan on file such that a student-athlete who exhibits signs, symptoms or behaviors consistent with a concussion shall be removed from practice or competition and evaluated by an athletics healthcare provider with experience in the evaluation and management of concussions. Student-athletes diagnosed with a concussion shall not return to activity for the remainder of that day. Medical clearance shall be determined by the team physician or his or her designee according to the concussion management plan.

"In addition, student-athletes must sign a statement in which they accept the responsibility for reporting their injuries and illnesses to the institutional medical staff, including signs and symptoms of concussions. During the review and signing process, student-athletes should be presented with educational material on concussions."

146. Boiled down to its essence, the plan rejects any measure of responsibility for the NCAA, its member schools, and the coaching staff of individual teams; and instead, puts the burden squarely on the shoulders of student-athletes – *the same student-athletes who have just sustained fresh head trauma* – to seek out medical attention, or decide whether to seek it in the first place. Second, the NCAA Plan assumes that NCAA conferences and member institutions understand concussion research, and will supplement and enforce the Plan. However, since the Plan's inception, few member institutions have accepted the NCAA's invitation to do so.

147. Unlike the comprehensive NFL plan, which provided for specific baseline testing and mandated objective evaluations for athletes, the NCAA plan is skeletal. Rather than directing member institutions to comply with particular procedures, the NCAA plan places the onus of developing the particular means of prevention and management upon NCAA member institutions, almost none of which have stepped forward with a comprehensive, compliant plan. Moreover, the NCAA plan burdens member institutions with the nearly impossible task of identifying when an athlete might have suffered a concussion, and should therefore be removed

from play. And, the NCAA plan does not outline any specific stepwise return to play protocol, even though an international consensus had first been reached at the Vienna Conference in 2001 and reaffirmed at the Prague and Zurich Conferences.

**G. The NCAA's Attempt to Shift the Economic Burden of its Negligence to the Class**

148. The NCAA requires that every member institution certify that each student-athlete is covered by the student-athlete's or parents' personal insurance coverage or through a basic accident medical policy carried by the institution (or through an institution's formal self-insurance plan).

149. For any medical care required by a student-athlete that has suffered a concussion or is displaying concussion symptoms, outside of the immediate treatment (if any) provided by the institution's sports medical staff, the NCAA requires that the costs be paid by the student-athlete's or parents' personal insurance or through the institution's plan.

150. While the NCAA maintains the NCAA Catastrophic Injury Insurance Program, the current \$90,000 deductible must first be borne by the student-athlete's or parents' personal insurance or through the institution's plan. Moreover, on information and belief and based on the evidence to date, the NCAA Catastrophic Injury Insurance Program has not covered the long-term debilitating effects resulting from repetitive head impacts in intercollegiate sports as described herein. In fact, the NCAA defines "true catastrophic injuries" that would be covered under the NCAA Catastrophic Injury Insurance Program as "relatively rare."<sup>62</sup>

151. Many injured student-athletes leave the sport burdened by medical bills as there is no uniform NCAA policy requiring that adequate insurance coverage be provided by the school:

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<sup>62</sup> <http://www.ncaa.org/wps/wcm/connect/public/NCAA/NCAA+Insurance+Programs/Student+Athlete+Insurance+Programs/Student+Athlete+Insurance+Programs+Homepage>.

"I thought I would be covered," said Erin Knauer, a *Colgate University* student who piled up \$80,000 in medical bills after injuring her back and legs in training for the crew team. Insurance has covered less than a third of the cost because of the way her condition was diagnosed. "You never think you're going to rack up that much of a bill."

152. Other athletes discover their financial problems long after their bodies have healed. An Ohio University football player, temporarily paralyzed during a workout, learned that he still owed \$1,800 in unpaid medical bills when he went to buy a car six years after his injury.

153. Many students, whether athletes or not, have medical insurance through their parents. But these plans often exclude varsity sports injuries, limit out-of-state treatment or do not cover much of the bill. Some colleges buy secondary policies to fill the gaps, although even these plans have holes. And only players hurt badly enough to require extensive care can turn to the NCAA for coverage. Its catastrophic insurance carries a \$75,000 deductible, which will increase to \$90,000 next year.

154. The absence of mandated coverage for athletes has prompted calls for change. "That's part of the cost of having an athletic program," said David Dranove, a professor of health industry management at *Northwestern University's* Kellogg School of Management. "It makes no more sense to tell the athletes, 'You go buy your own *health insurance*,' than it does to say, 'You go buy your own plane tickets and uniform.'"<sup>63</sup>

#### H. **Discovery of the Cause of Action, the NCAA's Fraudulent Concealment and Plaintiffs' Vulnerability**

155. When student-athletes sign their athletic participation packet the NCAA does not explain the short or long dangers of concussions or the potential post-college medical expenses

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<sup>63</sup> [http://www.nytimes.com/2009/07/16/sports/16athletes.html?pagewanted=all&\\_r=0](http://www.nytimes.com/2009/07/16/sports/16athletes.html?pagewanted=all&_r=0).

students may incur as a result of concussion related injuries. The NCAA does not share with the student-athlete the injury surveillance data it has collected or the number of concussions in the athletes' sport.

156. Prior to passage of the NCAA CMP on August 13, 2010, Plaintiffs and the Class were unaware that the conduct of the NCAA with respect to precaution, detection and treatment of concussions may have caused them to be at an increased risk for developing chronic brain injury symptoms, including, but not limited to, dementia and/or Alzheimer's disease.

157. Until at least April, 2010, Plaintiffs and the Class did not have a reasonable basis to know or believe that the aforementioned harm was caused by the concealment, neglect and/or misconduct of the NCAA.

158. Leading up to August 13, 2010, and over the past four decades, the NCAA has actively concealed any correlation between on-field concussions, its return-to-play policies and the chronic mental illnesses and maladies suffered by former student-athletes, including the Plaintiffs and the Class. Indeed, in 1996, a subcommittee of the NCAA observed an increase in concussions and noted that the "football helmet was not designed to protect this type of injury."<sup>64</sup> The NCAA did not warn student football or hockey players that their helmets did not protect against concussions and that the NCAA was seeing an increase in concussions. This is despite the fact an athlete would naturally think of his or her helmet as protective. But the NCAA knew of no "sports helmets ... set to prevent concussions." NCAA10025084.

159. The discovery of the NCAA's wrongdoing was also delayed due to the players' unequal bargaining power. Unlike the NFL there is no players union to study and advocate concerning players' health.

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<sup>64</sup> NCAA00001690-96.

160. Even today, by failing to implement appropriate policies to prevent, manage, mitigate and remedy head injuries and concussions sustained by its student-athletes, the NCAA continues to ignore and actively conceal the repeated warnings and patterns of injury of which the NCAA has actual knowledge.

161. Although the debilitating effects of concussions and other head injuries have already manifested for many former student-athletes, there are many others who have sustained such injuries as a direct result of the NCAA's failures and inactivity described above, but whose symptoms have only partially manifested or not yet manifested at all.

162. The NCAA has failed to establish a proper and adequate methodology to monitor and detect when players suffer concussive or sub-concussive injury in practice or game play. This has increased the risk of injury that will materialize in the future.

163. As a result, Plaintiffs and the Class require medical monitoring to detect the manifestation of post-injury symptoms.

#### **V. CLASS ACTION ALLEGATIONS**

164. Plaintiffs bring this complaint, as set forth below, individually and as a class action, pursuant to the provisions of Rules 23(a) and (b)(2) of the Federal Rules of Civil Procedure on behalf of a class defined as:

All current and former NCAA student-athletes who played an NCAA sport.

(The "Class"). Excluded from the Class are all persons who make a timely election to be excluded from the Class and the judge to whom this case is assigned and any immediate family members thereof.

165. Certification of Plaintiffs' claims for class-wide treatment is appropriate because Plaintiffs can prove the elements of their claims on a class-wide basis using the same

evidence as would be used to prove those elements in individual actions alleging the same claims.

166. **Numerosity – Federal Rule of Civil Procedure 23(a)(1).** The members of the Class are so numerous that individual joinder of all members of the Class is impracticable. On information and belief, there are thousands of student-athletes who have been damaged by the NCAA's wrongful conduct as alleged herein. The precise number of members of the Class and their addresses is presently unknown to Plaintiffs. In the period 2004-2009 the NCAA estimated 29,225 concussions in nine sports.<sup>65</sup> Members of the Class may be notified of the pendency of this action by recognized, Court-approved notice dissemination methods, which may include U.S. mail, electronic mail, Internet postings, and/or published notice.

167. **Commonality and Predominance – Federal Rule of Civil Procedure 23(a)(2) and 23(b)(3).** This action involves common questions of law and fact, which predominate over any questions affecting individual members of the Class, including, without limitation:

- a. whether the NCAA engaged in the conduct as alleged herein;
- b. whether Plaintiffs and the Class are entitled to equitable relief, including,

but not limited to, medical monitoring and other injunctive relief.

168. **Typicality – Federal Rule of Civil Procedure 23(a)(3).** Plaintiffs' claims are typical of the claims of the other members of the Class because, among other things, all members of the Class were comparably injured through the uniform misconduct described above.

169. **Adequacy of Representation – Federal Rule of Civil Procedure 23(a)(4).** Plaintiffs are adequate representatives of the Class because their interests do not conflict with the interests of the members of the Class they seek to represent; they have retained counsel

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<sup>65</sup> NCAA10091830.

competent and experienced in complex commercial and class action litigation; and Plaintiffs intend to prosecute this action vigorously. The interests of the Class will be fairly and adequately protected by Plaintiffs and their counsel.

**170. Declaratory and Injunctive Relief – Federal Rule of Civil Procedure 23(b)(2).**

The NCAA has acted or refused to act on grounds generally applicable to Plaintiffs and the members of the Class, thereby making appropriate final injunctive relief and declaratory relief, as described below.

**171. Superiority – Federal Rule of Civil Procedure 23(b)(3).** A class action is superior to any other available means for the fair and efficient adjudication of this controversy, and no unusual difficulties are likely to be encountered in the management of this class action. The damages or other financial detriment suffered by Plaintiffs and members of the Class are relatively small compared to the burden and expense that would be required to individually litigate their claims against the NCAA, so it would be impracticable for members of the Class to individually seek redress for the NCAA's wrongful conduct. Even if members of the Class could afford individual litigation, the court system could not. Individualized litigation creates a potential for inconsistent or contradictory judgments, and increases the delay and expense to all parties and the court system. By contrast, the class action device presents far fewer management difficulties, and provides the benefits of single adjudication, economy of scale, and comprehensive supervision by a single court.

## **VI. CLAIMS ALLEGED**

### **COUNT I**

#### **NEGLIGENCE (On Behalf of the Class)**

172. Plaintiffs adopt and incorporate by reference all prior paragraphs of this Complaint as if fully set forth herein.

173. At all relevant times, the NCAA had a duty toward Plaintiffs and the Class to supervise, regulate, monitor and provide reasonable and appropriate rules to minimize the risk of injury to the players.

174. The NCAA acted carelessly and negligently in its position as the regulatory body for college teams and its student-athletes, including Plaintiffs and the Class. The NCAA knew or should have known that its actions or its inaction in light of the rate and extent of concussions reported and made known to the NCAA would cause harm to players in both the short- and long-term.

175. The NCAA was careless and negligent by breaching the duty of due care it assumed for the benefit of the Plaintiffs and the Class, both generally and in the following particular respects:

- (i) failing to implement or require the implementation of medically-supervised stepwise return to play criteria with express time requirements for the student-athlete who was concussed or displayed concussion symptoms to be asymptomatic;
- (ii) failing to require, prior to 2010, that student-athletes who suffered a concussion or displayed concussion symptoms be managed by medical personnel with specific expertise in concussion diagnosis, treatment, and management;
- (iii) failing to require, prior to 2010, that student-athletes who suffered a concussion or displayed symptoms of a concussion not be left alone and that medical personnel

with specific expertise in concussion diagnosis, treatment, and management regularly monitor the student-athlete for deterioration;

- (iv) leaving discretion of return to play for a student-athlete that had suffered a concussion or displayed concussion symptoms to an individual member's institutions "medical staff" without regard to whether the staff included physicians or personnel with specific expertise in concussion diagnosis, treatment, and management;
- (v) failing to implement and/or enforce game rules of play designed to minimize, or that would have the effect of minimizing, head injuries or concussions;
- (vi) failing to police or require member institutions to follow Guideline 2o or 2i, respectively, throughout the Class Period; and
- (vii) failing to provide appropriate medical care or coverage for costs for medical care for student-athletes who suffered concussions or displayed concussion symptoms; and
- (viii) Other acts of negligence or carelessness that may materialize during the pendency of this action.

176. The Plaintiffs and the Class are entitled to injunctive relief requiring the NCAA, among other things, to adopt corrective measures regarding: implementation of system-wide "return to play" guidelines for student-athletes who have sustained concussions; the implementation of system-wide guidelines for the screening and detection of head injuries; and the implementation of legislation addressing the treatment and eligibility of student-athletes who have sustained multiple concussions in the course of play.

177. Moreover, Plaintiffs have no adequate remedy at law in that monetary damages cannot compensate them for the risk of long-term physical and economic losses due to concussions and sub-concussive injuries. Thus, Plaintiffs and the Class are entitled to medical monitoring. Without a Court-approved medical monitoring program as described herein in

Count II, or established by the Court, Plaintiffs and the Class members will continue to face an unreasonable risk of injury and disability.

## **COUNT II**

### **MEDICAL MONITORING (On Behalf of the Class)**

178. Plaintiffs adopt and incorporate by reference all prior paragraphs of this Complaint as if fully set forth herein. Plaintiffs bring this Count II as a remedy under the law of the State of Indiana. Alternatively, Plaintiffs bring this Count II under the laws of the states in which they reside and assert claims on behalf of the Class under the laws of the states in which class members reside.

179. The Plaintiffs experienced repetitive traumatic brain impacts during their respective NCAA careers that significantly increased their risk of developing post-concussion syndrome, neurodegenerative disorders and diseases, including, but not limited to, CTE, Alzheimer's disease, and other similar cognitive-impairing conditions.

180. Repetitive head impacts during practices and games has a microscopic and latent effect on the brain. Repetitive exposure to accelerations to the head causes deformation, twisting, shearing, and stretching of neuronal cells such that multiple forms of damage take place, including the release of small amounts of chemicals within the brain, such as the Tau protein. Among other things, the gradual build-up of Tau protein – sometimes over decades – causes CTE, which is the same phenomenon as boxer's encephalopathy (or "punch drunk syndrome") studied and reported by Harrison Martland in 1928.

181. The game of football and other games as played in the NCAA such as soccer, lacrosse, ice hockey, wrestling, field hockey, and basketball, including both practices and game play, have exposed student-athletes to hazardous conditions and risks of harm. These repetitive

head accelerations to which the Plaintiffs and the Class have been exposed presented risks of latent but long-term debilitating chronic illnesses which are not presented to the normal population. Absent the Defendant's negligence, fraud, and misrepresentations, the Plaintiffs' exposure to the risks of harm as described above would have been materially lower.

182. Accordingly, the repetitive head impacts sustained by NCAA players in NCAA games and practices exposed NCAA players, including the Plaintiffs, to subtle and repetitive changes within the brain on the cellular level. For that reason, the environment within which NCAA players have sustained repetitive head impacts exposed them to substantive hazards.

183. Depending on many factors, including the amount of the exposure to repetitive head impacts and the release of Tau protein, the player/victim will develop a range of subtle to significant neuro-cognitive changes over time.

184. The latent injuries which develop over time and manifest later in life include, but are not limited to, varying forms of neuro-cognitive disability, decline, personality change, mood swings, rage, and, sometimes, fully developed encephalopathy.

185. The NCAA was fully aware of the danger of exposing all NCAA players to repetitive head impacts, including the repetitive sub-concussive and concussive blows that increase the risk to NCAA players of, among other latent injuries, encephalopathy.

186. As noted above, by its actions and omissions and fraudulent conduct, the NCAA further breached its duty (which it had assumed long ago) of reasonable and ordinary care to the Plaintiffs by failing to provide NCAA players, including the Plaintiffs, with necessary or adequate protections in or more of the following ways:

- (i) failing to implement or require the implementation of medically-supervised stepwise return to play criteria with express time requirements for the student-athlete who was